

How to Correctly Build In a Silent Mini Fridge

When contemplating building a fridge into furniture it is vitally important that the furniture is designed correctly to allow proper ventilation for the fridge.

More specifically, you cannot put a fridge into a normal, unmodified cupboard - it will not work!

Without proper ventilation, heat will build up around the unit, leading to decreased performance and eventual failure.

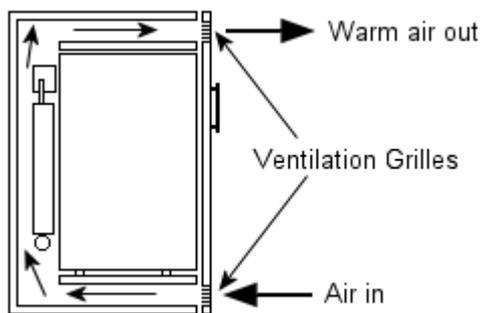
A fridge works by pumping heat from inside the unit, to cooling elements on the back of the unit. This heat must be able to dissipate so that the fridge can operate efficiently.

The elements on the back of the fridge cause the air around them to be heated, this hot air rises and is replaced with new, cooler air from below. This process is known as convection and is very effective as long as all guidelines within this document are correctly followed.

For convection to work effectively, hot air must be able to escape into the room from above the rear of the unit, and the cooler room air must be able to freely flow in from underneath the unit.

The diagrams below show some alternative installation methods. These are given as examples only and are by no means exhaustive.

It is recommended that a ventilation path of at least 200cm² is provided to flow over the rear of the unit (for example, a 5cm deep channel across the entire width of the fridge would be suitable).



Ventilating through the door only

This installation method is best suited where the unit is to be fitted into an existing cupboard with minimum disruption to the furniture.

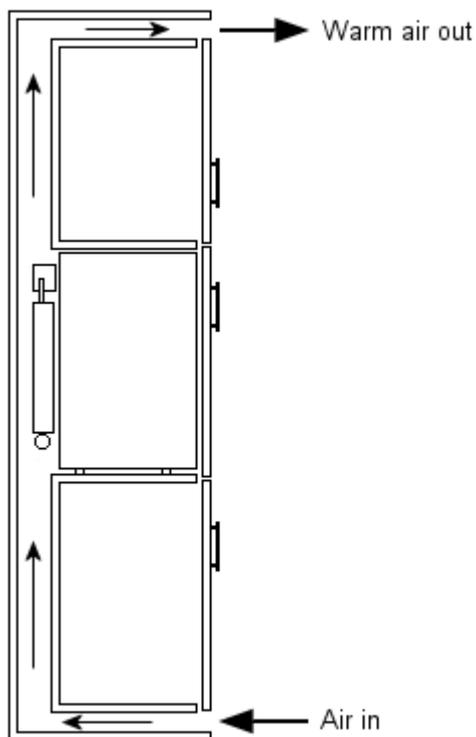
Grilles are fitted to the top and bottom of the door to coincide with the entry and exit air channels. The grilles should be a minimum of 400 x 60mm. Suitable grilles can be obtained from SDS London. The following is a link to probably some of the best grilles for the job:

http://www.sdslondon.co.uk/products.php?parent_id=278

The fridge must be raised from the base of the unit by approx. 5cm to allow air entering from the bottom grille to pass underneath. This can be achieved either by a shelf, or by wooden rails (running front to back) which the feet of the fridge can stand on.

A shelf the full width of the cupboard must be placed immediately on top of the fridge. It should run from the front of the cupboard to just short of the vents on the top of the fridge itself. This is to prevent warm air from circulating around the fridge. With the door closed, the only path for warm air to follow should be through the top grille on the door.

Building in to a tall cupboard



This may be furniture which is built from the floor to the ceiling (or very close to it).

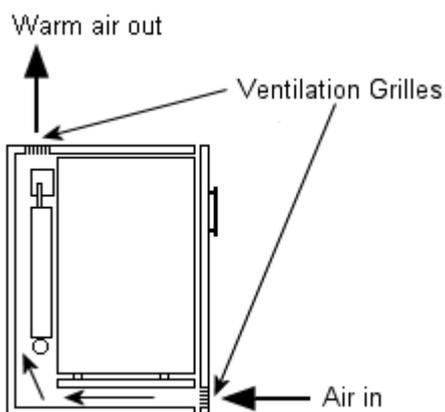
A free air channel is provided from the floor entry point right the way up to the ceiling exit point. Both entry and exit points are at the front and these should be fitted with grilles and not obstructed in any way (i.e. not behind cupboard doors).

The diagram shows a cupboard above and below the fridge, note how the air channel runs behind these.

The base of the upper cupboard must not be more than 5cm above the top of the fridge to ensure that the convection path is not interrupted.

Both cupboards and the fridge compartment can be fitted with doors (as shown) if required.

Building in to a small cupboard



This may be floor standing or wall mounted furniture which is more than 5cm away from the ceiling.

The fridge must be raised from the base of the unit by approx. 5cm to allow air entering from the front to pass underneath. This can be achieved either by a shelf, or by wooden rails (running front to back) which the feet of the fridge can stand on.

The top of the cupboard must not be more than 5cm above the top of the fridge to ensure that the convection path is not interrupted.

The air entry and exit points should be fitted with a grille and not obstructed in any way.

The fridge compartment can be fitted with a door if required.

The air inlet grille can either be mounted in the bottom of the door, or below the door (for example, in a kick board).

Minimum Furniture Internal Dimensions

30ltr Caldura Fridge: H 500mm W 415mm D 470mm

40ltr Caldura Fridge: H 560mm W 415mm D 490mm